Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless Operations in the 3650-3700 MHz Band	)	ET Docket No. 04-151
	)	
Rules for Wireless Broadband Services in the 3650-3700 MHz Band	)	WT Docket No. 05-96
	)	
Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band	)	ET Docket No. 02-380
	)	
Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band	)	ET Docket No. 98-237

OPPOSITION OF XO COMMUNICATIONS, INC. TO PETITIONS FOR RECONSIDERATION

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TABLE OF CONTENTS

SUMMARY

In its Report and Order and Memorandum Opinion and Order in this proceeding, the Federal Communications Commission ("FCC") generally achieved the proper balance between the benefits of an unlicensed approach and required interference protections for users of the 3650-3700 MHz band (the "3.6 GHz Band").

The best way to assure access to last mile wireless broadband spectrum, especially in rural areas, is through an unlicensed approach. Slight modification of the FCC's plan will allow use of the 3.6 GHz Band without the need for licensing. In the long run, use of contention based technology in connection with frequency coordination is preferable to an approach under which access to spectrum is limited by participation in a competitive bidding process. Nevertheless, XO supports clarification of the contention based protocol requirement. Rather than requiring the industry to agree on a single contention based protocol or requiring a specific contention based protocol, the FCC should allow any contention based protocol that meets the FCC's requirements to be approved for use.

The FCC should not reject use of contention based protocols merely because the technology is not yet fully developed. In the interim, XO recommends the use of industry standard coordination processes in order to ensure access to the 3.6 GHz Band by multiple entities in the same geographic area and to prevent one or a limited number of entities from controlling this valuable resource. These frequency coordination processes can continue to be used, even after contention based protocols are developed. At that time, those protocols can become an additional coordination tool. Because neither frequency coordination nor a combination of contention based technologies and coordination will permit an unlimited number of users, XO recommends the use of specific performance standards to ensure that entities are

sincere in their request for spectrum and that once authorized, that they employ their authorized spectrum.

XO also supports increased power limits for subscriber stations because subscriber devices must be sufficiently powered to communicate with base stations. Finally, XO supports extending the spectrum leasing regulations to the 3.6 GHz Band.

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XO Communications, Inc. ("XO") pursuant to Section 1.429(f) of the rules and regulations of the Federal Communications Commission ("FCC" or "Commission")[1/] and the invitation extended by the FCC in the Public Notice issued on July 18, 2005[2/] hereby submits its opposition to the petitions for reconsideration of the Report and Order and Memorandum Opinion and Order ("Order") released by the FCC in the above referenced matter on March 16, 2005.[3/] Contrary to positions expressed in the petitions for reconsideration, the Order generally struck an appropriate balance between the benefits of making spectrum available on an unlicensed basis and the protections necessary to ensure that users of the band 3650-3700 MHz (the "3.6 GHz Band") are not subject to harmful interference from other operators.

1/ 47 C.F.R. 1.429(f) (2004).

2/ Petitions for Reconsideration of Action in Rulemaking Proceeding, Public Notice, Report No. 2722 (July 18, 2005); Petitions for Reconsideration of Action in Rulemaking Proceeding, 70 Fed. Reg. 43, 429 (July 27, 2005).

3/ *Wireless Operations in the 3650-3700 MHz Band,* Report and Order and Memorandum Opinion and Order, 20 FCC Rcd 6502 (2005).

I. BACKGROUND

XO is a full service provider of telecommunications services in the United States, providing local and long-distance voice, DSL, data networking, Web hosting, and other communications services to a variety of customers. In addition, XO is one of the most significant holders of local multipoint distribution service ("LMDS") spectrum in the United States, with licenses in more than seventy-three markets covering more than ninety-five percent of the population in the top thirty United States cities.[4/] XO plans to use its LMDS spectrum to provide fixed wireless broadband "middle mile" wireless transport in conjunction with its intercity and metropolitan fiber network to provide local, national, and global connectivity solutions capable of, among other things, bypassing the incumbent local exchange carrier's ("ILECs'") infrastructure.[5/] XO anticipates that some of the traffic that it will carry on its LMDS network will be transmitted to it via wireless networks from user (either residential or small business) premises. It expects that these "last mile" connections between end users and its LMDS network will be provided by, among others, service providers using the 3.6 GHz Band.

The Order provides for the licensing of the 3.6 GHz Band on a non-exclusive nationwide basis. Once an entity obtains a nationwide authorization, it will be required to register individual transmit sites. In addition, equipment in the 3.6 GHz Band is required to operate with "contention based" technologies designed to allow multiple entities to operate in the band in the same geographic area without causing harmful interference to each other.

Several parties submitted petitions for reconsideration of the Order. Many of those parties claim that the obligations established in the rules – that equipment employ contention

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4/ XO Annual SEC 10K Filing at 1, *available at* www.sec.gov (2004) ("*XO 10K*"); *see also* "XO Communications Announces Successful Trial of Fixed Wireless Broadband Access," *Press Release*, *available at* www.xo.com (Jan. 1, 2004).

5/ *XO 10K* at 3.

based technologies, that licensees register fixed stations and that licensees avoid the installation of fixed stations that will cause harmful interference – are insufficient to guarantee that service providers will be able to offer the quality of service that will ensure consumer acceptance. Accordingly, they propose that the FCC issue exclusive licenses for either some or all of the 3.6 GHz Band, in either all or some geographic areas.

As outlined below, XO believes that the FCC's approach, modified slightly, is better than requiring service providers to participate in the competitive bidding process. Accordingly, XO is pleased to have this opportunity to submit the following opposition to the petitions for reconsideration.

II. DISCUSSION

A. An Unlicensed Approach Is the Best Way to Assure Access to Wireless Broadband Spectrum in General and in Rural Areas in Particular

It is critical that the FCC take measures in this proceeding designed to ensure the most intense use of spectrum for wireless broadband capabilities. As the FCC has recognized, wireless is a prime path for providing wireless broadband services and is a key component of broadband competition. This is especially true in light of an increasing consumer demand for mobile data service.[6/] Wireless broadband technology provides services that other

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[6/] *See Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 14165, 14168 (2004) ("*Educational Order*"); *see also* Wireless Broadband Access Task Force Seeks Public Comment on Issues Related To Commission's Wireless Broadband Policies, Public Notice, 19 FCC Rcd 8166 (2004) (noting that wireless broadband is a "popular alternative" for business and residential consumers).

communications technologies cannot; it provides portability and mobility, which allows it to provide seamless connectivity.[7/]

The best way to ensure the proliferation of this last mile broadband technology is through the use of unlicensed spectrum.[8/] First, the existence of fewer barriers encourages new technologies and more participants in the market.[9/] In the context of last mile wireless broadband access service, there are fewer regulatory barriers when spectrum is available on an unlicensed basis. Therefore, the availability of unlicensed spectrum in this service will promote new wireless technologies and broadband services. In addition, the licensing scheme adopted by the FCC in this proceeding will "provide additional spectrum to WISPs and other potential users suitable for backhaul and other broadband purposes such as community networks."[10/] Unlicensed spectrum will also allow for new participants because providers will be able to more easily gain access to the spectrum.[11/]

7/ *See* Wireless Broadband Access Task Force, FCC, *Connected and on the Go: Broadband Goes Wireless*, at 2 (Feb. 2005).

8/ Not all wireless broadband spectrum need be available on an unlicensed basis; for some services, licensed spectrum use is more appropriate. However, XO believes that the intended configuration of systems in the 3.6 GHz band – last mile point to multipoint systems – make it particularly appropriate for unlicensed treatment.

9/ *See Revision of Parts 2 and 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Report and Order, 18 FCC Rcd 24484, 24485, 24488 (2003) (noting that there has been a growth in the demand for unlicensed wireless devices such as those used for wireless local area networking and broadband internet access); *Unlicensed Operation in the TV Broadcast Bands*, Notice of Proposed Rulemaking, 19 FCC Rcd 10018, 10019 (2004); Kenneth R. Carter et al., *Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Devices and Their Regulatory Issues*, 39 OSP Working Paper 48 (2003).

10/ *Wireless Operations in the 3650-3700 MHz Band*, Report and Order and Memorandum Opinion and Order, 20 FCC Rcd at 6508.

11/ *Id.* at 6509.

Further, in certain cases, such as the 3.6 GHz Band, spectrum can be more efficiently used in an unlicensed regulatory scheme. Licensed spectrum may permit licensees to occupy spectrum without using it. Unlicensed spectrum creates incentives for operators to use technologies that more effectively utilize the spectrum and do not merely occupy the spectrum to impede others from using it.[12/] In addition, unlicensed spectrum may be accessible at a lower cost than licensed spectrum, a benefit that may be passed on to consumers.[13/] As the FCC has recognized, for WISPs who require reduced up-front costs in order to remain viable, the lower cost of unlicensed spectrum is crucial.[14/]

Finally, the Commission has found that the availability of unlicensed spectrum may advance its goal of providing advanced telecommunications services to all Americans, especially those in rural areas.[15/] The FCC has recognized the importance of wireless access in rural areas by stating its goal to provide "all Americans with access to ubiquitous wireless broadband connections, regardless of their location."[16/] The FCC specifically envisioned that the 3.6 GHz Band will be able to provide last mile communications capacity to rural areas. The FCC stated in the Order that the licensing scheme it adopted "will allow further deployment of advanced

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12/ *See, e.g.*, FCC Spectrum Policy Task Force, *Report of the Spectrum Efficiency Working Group*, at 31 (2002).

13/ *See* Carter, *supra* note 9, at 5.

14/ *Wireless Operations in the 3650-3700 MHz Band*, Report and Order and Memorandum Opinion and Order, 20 FCC Rcd at 6507.

15/ *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 19078, 19081 (2004).

16/ *Educational Order*, 19 FCC Rcd at 14167; *see also* Jonathan S. Adelstein, Remarks at the Wireless Internet Service Provider Forum, South Dakota School of Mines and Technology (May 25, 2004), *available at* http://www.fcc.gov ("Wireless broadband technologies, in particular, offer a lot of promise for rural areas . . .").

telecommunications services and technologies to all Americans, especially in the rural heartland."[17/]

The interests of rural (as well as urban) areas are best served, in general, when there is a proliferation of available products, which ultimately drives down equipment costs. However, equipment costs are only reduced when products are made available to the biggest population centers – urban areas. Once the market is developed for a product in an urban area, product costs will be reduced because of volume manufacturing. Therefore, in order for rural areas to enjoy the benefits of the use of the 3.6 GHz Band, there must be rapid deployment of products in urban areas. However, the quickest path to product and service deployment in urban areas is, for the reasons cited above, through unlicensed operations. Therefore, the proliferation of last mile wireless broadband access in rural areas can best be achieved by the unlicensed use of spectrum in urban areas. It is therefore contrary to the interests of rural consumers for spectrum, as some have suggested, to be made available on a licensed basis in urban areas and an unlicensed basis in rural areas. Only through the robust product development in urban areas that is achieved by unlicensed operations there will rural consumers secure the benefits of last mile wireless broadband capabilities.

B. Modification of FCC's Plan Will Permit Use of the 3.6 GHz Band Without the Need to Impose Licensing Obligations

1. XO Supports Clarification of theContention Based Protocol Requirement

Unlike Intel/Redline/Alvarion, XO believes that, ultimately, the use of one or more forms of contention based technology will permit multiple parties to employ the 3.6 GHz Band in a geographic area, and that the use of a contention based technologies is preferable to a licensed

17/ *Wireless Operations in the 3650-3700 MHz Band*, Report and Order and Memorandum Opinion and Order, 20 FCC Rcd at 6503.

approach under which access to spectrum would be based on competitive bidding.[18/] Nevertheless, XO agrees with parties which state that the FCC's formulation of, and requirement to use, contention based technology requires clarification. For example, several parties express concern that the rules require industry agreement on a single contention based protocol for the 3.6 GHz Band.[19/] XO concurs that the FCC should clarify that the rules do not require industry agreement on a single contention based protocol. Such a requirement would unnecessarily delay the introduction of service in the 3.6 GHz Band and potentially restrict innovation by imposing a single technology on a dynamic industry. Instead, like the WiMax Forum, XO believes that the requirement that equipment incorporate a contention based protocol should be technology neutral.[20/]

Similarly, XO agrees with those parties that assert that required use of a "listen-before-talk" contention based protocol may not be appropriate for the 3.6 GHz Band, and the FCC should not restrict contention based technologies to this process.[21/] Instead, the FCC should

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[18/] Petition for Reconsideration of Intel/Redline/Alvarion at 19-20. As noted further below, XO expects that in the short term, use of industry standard coordination practices will be a valuable substitute for (and ultimately complement to) the use of contention based protocols.

[19/] *See, e.g.*, Petition for Reconsideration of WCA at 5-6; Petition for Reconsideration of WiMax Forum at 10; Petition for Reconsideration of Motorola at 3.

[20/] Petition for Reconsideration of WiMax Forum at 10. Accordingly, XO urges the FCC to reject the request of BRN Phoenix, Inc. ("BRN") that BRN's technology should be the basis of the contention based protocol. It is not in the public interest to incorporate a single company's technology as an element of the contention based protocol, even if that company proposes to license that technology (or elements of that technology) on a cost-free basis.

[21/] *See* Petition for Reconsideration of Intel/Redline/Alvarion at 11-12; Petition for Reconsideration of WCA at 7, 8. Several parties complain that a listen-before-talk is protocol is not appropriate for use in the 3.6 GHz band because it is best employed in connection with short range communications, with directional antennas and because it presents "hidden node" problems. *See* Petition for Reconsideration of Intel/Redline/Alvarion at 11-12; Petition for Reconsideration of WCA at 7, 8; Petition for Reconsideration of Motorola at 4-5. XO expresses no opinion regarding whether a listen-before-talk contention based protocol is indeed inadequate for this band, but urges the FCC to use the equipment approval process it has already established

ensure that any contention based protocol may be approved for use. In particular, XO urges the FCC to confirm that "schedule based" or "time slot," or "discover-during- turn up" contention based protocols are contemplated by its regulations. The use of these alternative protocols can ultimately be used, in connection with industry standard frequency coordination practices and the other mechanisms noted below, to permit multiple entities to employ the 3.6 GHz Band in the same geographic area. XO agrees that the FCC's test for assessing contention based protocols should ensure that any approved protocols do not foreclose the use of equipment that otherwise meets the IEEE standards for 802.16 for WiMax products.

2. The FCC Should Not Reject The Use of Contention Based Protocols Merely Because They Are Not Fully Developed Today

XO recognizes that contention based technologies may not be fully developed today and may not be capable of fully performing the functions that the FCC envisions. XO certainly does not wish to delay the introduction of 3.6 GHz service while those technologies are being further developed. Moreover, equipment manufacturers, as evidenced by their petitions for reconsideration, are anxious to sell the products they have already developed, and do not necessarily wish to invest more development time and money before being able to sell their products. The public interest dictates that the FCC look beyond the immediate lack of technology to the long-term benefits that will exist from an unlicensed approach. Further, as explained more fully below, at least in the short term, frequency coordination will allow equipment manufacturers to sell current generation products while contention based technologies are being developed. Therefore, the FCC should not reject the use of contention based protocols

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for the 3.6 GHz Band – which is designed to evaluate the capability of equipment approved for use in the band to employ contention based technologies – to address the concerns addressed in the petitions for reconsideration. As XO notes below, there are other contention based protocols that do not suffer from the same limitations as listen-before-talk protocols.

based simply on the fact that all of the technical parameters of contention based systems have not yet been fully developed.[22/]

3. Technology and Coordination Will Permit the Use of the 3.6 GHz Band by Multiple Entities in the Same Geographic Area

As noted above, XO recognizes that contention based technologies may not yet be fully developed and cannot act as an immediate tool for ensuring that multiple entities can use the 3.6 GHz Band in a market. Accordingly, in the short term, as discussed more fully below, XO recommends the use of industry standard coordination processes to ensure access to the 3.6 GHz Band by multiple entities. However, neither frequency coordination in the short run nor a combination of contention based technologies and coordination in the long term will permit an unlimited number of users in a market. Therefore, XO proposes the following measures designed to permit multiple users in an unlicensed environment. Unlike completely unlicensed bands, the measures outlined below will serve to restrict access. However, restricted access is better than licensing by competitive bidding on the one hand, and completely unrestricted access on the other hand.

First, the FCC should retain the registration process incorporated in the rules. As the WiMax Forum points out, the following are some of the benefits that licensees will enjoy based on fixed station registration:

- Operators will be able to identify each other, providing an efficient mechanism for cooperative spectrum use.
- Consumer devices will be eliminated from the band, thus creating a more manageable environment than most bands dedicated for unlicensed operations.

22/ Because: 1) contention based technologies have not yet been fully developed; 2) manufacturers have already invested in equipment that may not meet the FCC's contention goals; and 3) frequency coordination and performance obligations may act as short term substitutes for (and long term complements to) full implementation of contention based technologies, XO does not object to a phased in approach the requirement that equipment demonstrate contention based capabilities.

- Registration will promote compliance with the FCC's rules.
- Satellite earth station operators can be better protected when fixed stations are registered.[23/]

Because XO does not envision that access to the 3.6 GHz Band will be unlimited, the registration process will establish the first-in-time rights that the Enterprise Wireless Association ("EWA") points out is critical to administering shared frequency bands.[24/] The Commission should ensure that the first-in-time protections that EWA notes are applicable to the 3.6 GHz Band. In particular, new entrants should be obligated to correct interference they cause, even if they are operating in accordance with the FCC's rules. XO specifically opposes any regulations that would impose on incumbent users the obligation to modify their operations to accommodate new entrants.

A second method by which the 3.6 GHz Band may be more successfully shared – and one that may be successfully employed in the short term while contention based technologies are being refined – is to impose frequency coordination obligations on registrants. XO does not wish to impose either excessive cost or delay on the process of obtaining fixed station registration coordination. However, frequency coordination will serve as an effective "gating" mechanism so that an excessive number of entities do not attempt to use the 3.6 GHz band in one area. XO agrees with WCA, that the FCC's current obligation – which requires that licensees use "every effort" to ensure that they avoid harmful interference – will not be effective.[25/] Accordingly, coordination based on established engineering parameters must instead provide the gating function that potential registrants themselves may not.

23/ Petition for Reconsideration of WiMax Forum at 5.

24/ Petition for Reconsideration of Enterprise Wireless Association at 6.

25/ Petition for Reconsideration of WCA at 5.

While frequency coordination may serve to limit the number of entities that can obtain fixed station authorizations, it is significantly preferable to the alternative – licensed systems authorized through competitive bidding – which will restrict the use of spectrum, potentially in a large geographic area, to a single entity.[26/] There are many mechanisms by which frequency coordination may be implemented. Coordination is performed today under Parts 90 (in which the rules governing the 3.6 GHz band are contained) and 101 of the FCC's rules. XO also observes that in its recently adopted rules governing the bands 70, 80 and 90 GHz, the Commission instituted a similar regulatory regime: a nationwide non-exclusive licensing mechanism, with the requirement for licensees to obtain fixed station registration.[27/]

Although the FCC should consider all potential forms of frequency coordination, it is likely that Part 90 style coordination is most appropriate for use in the 3.6 GHz Band. XO expects that the FCC would empower coordinators – as it has in other contexts – to assess licensees' needs for spectrum at particular locations.[28/] For example, in order to promote the

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[26/] XO recognizes that the FCC may conduct an auction that permits the use of more than a single entity to use the 3.6 GHz Band. Even in that case, the number of authorized users would be limited and likely few.

[27/] *Amendment of Part 2 of the Commission's Rules to Realign the 76-81 GHz band the Frequency Range Above 95 GHz Consistent with International Allocation Changes*, Report and Order, 19 FCC Rcd 3212 (2004).

[28/] *See, e.g., Revisions to Broadcast Auxiliary Service Rules in Part 74 and Conforming Technical Rules for Broadcast Auxiliary Service*, Report and Order, 17 FCC Rcd 22979, 23004 (2002) (noting that frequency coordinators may be in the best position to evaluate local operating conditions); *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them*, Report and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 10076, 10110 (1995) (permitting frequency coordinators for radio services to designate channels for low-power use); *Frequency Coordination in the Private Land Mobile Radio Services*, Report and Order, 103 FCC Rcd 1093 (1986).

maximum availability of spectrum in a geographic area, a coordinator may require licensees to justify the requested use of greater than a minimum sized channel at a single site.[29/]

One of the benefits of a registration process that involves frequency coordination is the opportunity for the coordination to become more sophisticated over time and to take into consideration additional engineering capabilities, including contention based protocols. Today, for example, fewer entities may be able to use the spectrum in a geographic area if they are employing different technologies because there may be limited ability for those entities to coordinate their operations. In that case, frequency coordinators will presumably base the permitted use of spectrum on metrics that rely on traditional metrics – power and bandwidth. However, in the future, it will likely be possible for coordination to permit the more intense use of the same amount of spectrum in the same area, because of the development of technology that is able to self coordinate schedule based transmissions or use discover-during-turn up technologies.

Therefore, unlike EWA, XO believes that coordination can be used in connection with contention based protocols, as that term is more broadly defined by XO. As they develop, contention based protocols can be used as a tool in the coordination process to determine when additional use of the band – beyond that otherwise permitted by separation based on power and bandwidth considerations – is possible. XO also supports the WCA's efforts to define certain

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[29/] XO expects that coordinators would routinely permit the use of the amount of spectrum equal to a single transmission path, as defined by the equipment manufacturer whose product a licensee expected to employ. The presumption that licensees be authorized for use of one channel worth of bandwidth will facilitate the us of the 3.6 GHz band by multiple licensees at a site or in a geographic area. Licensees would presumably be able to justify the need for more spectrum in a variety of ways. For example, they could demonstrate that additional channels are justified based on the use of antenna sectorization or polarization. Similarly, licensees could demonstrate that even though greater than a single channel worth of bandwidth is required, the area of operation in which they will operate is limited, thereby allowing re-use of the spectrum for which they are registered.

technical parameters.[30/] While XO does not support WCA's rationale for desiring the establishment of those parameters – the creation of geographic area licenses – the development of these rules will assist in the coordination process by creating, for example, anticipated signal strength levels at service area boundaries. [31/]

A third tool that will facilitate the use of spectrum on a coordinated basis is performance standards. Like Intel/Redline/Alvarion, XO recognizes that without performance standards, entities that obtain site registrations may "squat" on the authorized channels, thereby preventing the frequencies from being used by others. In order to overcome this problem, the FCC may wish to employ a variety of tools. First, it can require that licensees have rights to employ a particular site before they seek fixed station registration for that location. Second, it can require that licensees have placed an equipment order before submitting a request for site registration. [32/] At a minimum, licensees should be required to place any registered fixed stations in operation by one year from the date that they obtain registration and report to the FCC whether the registered facilities were constructed.[33/] As with other services, licensees that fail to submit notifications that they constructed their facilities would be subject to automatic cancellation of their registered fixed station and would lose protection for that fixed site.[34/]

30/ *See* Petition for Reconsideration of WCA at 14-19.

31/ *See also* Petition for Reconsideration of WiMax Forum at 15.

32/ XO does not suggest that licensees be required to submit evidence of site rights or equipment purchases with a request for registration, but instead proposes that licensees retain those documents and make them available to the FCC on request.

33/ Licensees should also be required to demonstrate that all of the bandwidth for which they are authorized at a particular site is being used.

34/ *See, e.g.*, 47 C.F.R. 1.955, 1.946(a)(2) (2004). If licensees construct facilities at a registered site, but are not employing the full bandwidth for which they are authorized, the registration should be modified to reflect the bandwidth actually used, without prejudice for the licensee to later request the use of additional bandwidth at that location.

In addition to performance requirements, and in order to promote the most intense use possible of the 3.6 GHz Band, licensees should be required annually to perform a Web-based inventory of the operational status of fixed stations for which they are registered. Licensees should be required to perform such an inventory on the anniversary of the date they obtained their nationwide authorization. As part of the inventory system, Licensees would be required to indicate the fixed stations that are no longer in operation and the spectrum actually in use at a particular site.[35/] This inventory will permit the FCC to delete or modify site registrations, and permit additional stations to be coordinated for operation in a particular area.

XO is mindful that the development of the coordination and reporting mechanisms it suggests will require time. However, the development of auction rules and the technical parameters necessary to implement them – out of band emission limits and geographic boundary signal strength limits, among others – will also require time. XO believes that the time will be better spent in an effort to develop a licensing scheme under which multiple entities can access the 3.6 GHz Band in a geographic area, rather than in the development of rules that will allow only one entity to control the spectrum.

C. XO Supports an Increase in the Power Limits for Subscriber Stations

The WiMax Forum argues that power levels should be increased for fixed or mobile subscriber stations to 5 watt/25 MHz EIRP.[36/] XO supports this proposed change. It is critical that subscriber devices be sufficiently powered to communicate with base stations. XO agrees with the WiMax Forum that the levels specified in the FCC's rules may be insufficient to accomplish that need. Using the coordinated approach that XO recommends, coordinators will

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35/ XO proposes that stations that have not operated within the last six (6) months be considered to be out of operation.

36/ Petition for Reconsideration of WiMax Forum at 11.

help ensure that the 3.6 GHz Band will be efficiently used, even with this higher transmitter power by requiring licensees to justify technical parameters for individual sites. XO does not necessarily believe, however, that increased power should be permitted for point-to-point stations.[37/] The 3.6 GHz Band should be principally employed for subscriber/hub communications. There is sufficient alternative spectrum available for point-to-point operations without creating the additional interference to subscriber/hub communications that higher powered use of point-to-point links may cause.

D. XO Supports Spectrum Leasing in the 3.6 GHz Band

WCA asks the FCC to extend the spectrum leasing regulations to the 3.6 GHz band.[38/] Regardless of the FCC's initial rationale for declining to extend all of the spectrum leasing rules to the 3.6 GHz Band, under XO's proposal, a potentially limited number of entities will be authorized to operate 3.6 GHz systems in a market. It would be efficient, therefore, to permit those entities to lease some or all of the capacity of their systems to third parties.

37/ *See, e.g., id.* at 11; Petition for Reconsideration of Redline at 3.

38/ Petition for Reconsideration of WCA at 19-21.

III. CONCLUSION

WHEREFORE, THE PREMISES CONSIDERED, XO Communications, Inc. hereby submits the foregoing opposition to the petitions for reconsideration in this proceeding and asks that the FCC proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

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August 11, 2005

CERTIFICATE OF SERVICE

I, Robert G. Kidwell, hereby certify that on this 11th day of August 2005, the foregoing Opposition of XO Communications Inc. was delivered, via first class mail to the following:

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